

U.S. Serial No. 10/574,796
Family No. P2003J077 (GJH-0325)
Response to Non-Final Office Action

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LISTING OF THE CLAIMS

1. (Currently Amended) A method for mixing fluidized particles with a fluid hydrocarbon feed stream in a feed injection zone of a fluid catalytic cracker which comprises:

- (a) passing fluidized particles to a particle conduit;
- (b) conducting the fluidized particles from the particle conduit to the feed injection zone containing a non-circular conduit provided that the particle conduit and the non-circular conduit have a substantially uniform equal cross-sectional area; and
- (c) injecting fluid hydrocarbon feed into the feed injection zone through a plurality of feed injectors located upon said non-circular conduit.

2. (Previously Amended) The method of claim 1 wherein the non-circular conduit is ellipsoidal, rectangular, square or two parallel sides with semi-circular or ellipsoidal ends.

3. (Currently Amended) The method of claim 2 wherein the non-circular conduit is ellipsoidal.

4. (Previously Amended) The method of claim 2 wherein the non-circular conduit is rectangular.

5. (Currently Amended) The method of claim 1 wherein the feed injectors are arranged in a plane perpendicular to the direction of axial flow of catalyst the fluidized particles in the injection zone.

6. (Previously Amended) The method of any claim 5 wherein the feed injectors are injector nozzles.

7. (Currently Amended) The method of claim 6 wherein the direction of flow from the feed injector nozzles is are perpendicular (90 degrees) to the axial flow of catalyst the fluidized particles in the injection zone.

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8. (Currently Amended) The method of claim 6 wherein the feed injector nozzles are at angles of from 20 to 90 degrees in relative to the direction of axial flow of the fluidized particles in the injection zone.

9. (Canceled)

10. (Currently Amended) The method of claim 4 [[9]] wherein the feed injected into the feed injection zone has a penetration equal to $0.33D_{\text{effective}}$.